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AUTHOR Kysor, Daniel, F.
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ABSTRACT

This study explored how transitioning from a single-sex to a coeducational high school affected the self-concept of students in a private, Catholic high school. The initial data gathered were from a single-sex, all female population. Thereafter, data reflect an influx of males as the school transitioned from a single-sex to a coeducational high school. Subjects were volunteer students in grades 9 through 12 who completed the Self Description Questionnaire each year from 1989 through 1992. The results indicated that males maintained significantly higher total self-concepts than did females while no significant differences were noted in total self-concept as students moved from a single-sex to a coeducational school. In terms of general self-concept, males again demonstrated significantly higher self-concepts than did females, while general self-concept improved significantly as all students progressed from freshmen to seniors. Positive self-concept in the mathematics area was significantly in favor of males in comparison to females, while underclass students demonstrated significantly higher mathematics self-concepts than did their senior counterparts. Males also scored significantly higher than females in self-concept of physical abilities. (NB)

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Transitioning From Single-Sex to Coeducational High School: A Study Exploring the Effects on Self-Concept Using the Self Description Questionnaire II

Daniel F. Kyser
Department of Counselor Education and Educational Psychology
Mississippi State University

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Abstract

The self-concepts of students enrolled in a private, Catholic high school were measured over a four year period of time from 1989 through 1993 as the school transitioned from a single-sex, female student body to a coeducational high school. Self-concept was measured utilizing the Self Description Questionnaire II, a instrument that measures self-concept in eleven separate areas. The results indicated that males maintain significantly higher self-concepts than females while no significant differences were noted in total self-concept as progression through the educational setting occurred. The findings are congruent with a 1991-1992 American Association of University Women study that most recently espoused this position but differed from Marsh, Parker and Barne's 1985 findings.

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Transitioning From Single-Sex to Coeducational High School:
A Study Exploring the Effects on Self-Concept Using the
Self Description Questionnaire II

The predominant mode of education in the United States of America today is the public school system. Generally speaking, these systems have been coeducational in nature, free and accessible to all students. Other educational options however, are available to persons who, for one reason or another, choose not to attend free, public educational systems. One of the options available is private schooling. Private schooling can take various forms, with one of the more prominent types being church affiliated education. Even within this specific form of private education various organizational structures have emerged that have been utilized during the history of formalized education. Of particular note are the Catholic, single-sex school systems wherein the students are exclusively of one or the other gender (Lee & Bryk, 1986; Riordan, 1985).

Over the past twenty years the general trend has been away from single-sex educational institutions toward coeducational facilities (Lee & Bryk, 1986; Riordon, 1985). While the fundamental reason cited for this movement has been economic in nature, research suggests that single-sex education has been viewed as an obstruction to successful adolescent development (Dale, 1969, 1971, 1974; Lee & Bryk, 1986; Schneider & Coutts,

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1982). Feather (1974) resoundingly argued that there were inherent differences between the two types of institutions and between the two genders: differences with regard to interests and aptitudes.

Several studies in the literature suggest that Catholic schools in general and single-sex, female Catholic schools specifically outperform their counterparts in other educational settings (Jencks 1985; Hoffer, Greeley, & Coleman 1985; Riordan 1986; Willms 1985). The above listed authors further concluded, based on the High School and Beyond (HSB) database, that Catholic school students scored higher on standardized achievement tests and were more disciplined and controlled than their public school complements. These findings suggest that females in single-sex Catholic schools maintain higher academic self-concepts in comparison to students in other school settings.

Generally speaking, self-concept is how one feels about him- or herself. Shavelson, Hubner, and Stanton (1976) suggested that self-concept is self perceptions derived from interactions with significant others, self-attributions, and other experiential components of the social environment. Shavelson et al. (1976) further asserted that the structure of self-concept is multi-faceted and hierarchical, with an individual's perceptions moving from specific subareas related to self, proceeding through

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academic domains, and culminating with inferences about self in general terms. Marx and Winne's (1978) research on construct interpretations of three separate self-concept inventories failed to offer support for such a hierarchical, multidifferentiated model of the self-concept construct.

Shavelson and Bolus (1982) defined self-concept as " a persons perceptions of him- or herself" (p. 3), further suggesting that self-concept is a multifaceted and hierarchically ordered construct. Hansford and Hattie (1982) offered further support for Shavelson's model noting that, "these perceptions are formed through one's experiences with and interpretation of one's environment, and are influenced especially by significant others, and one's attributions for one's behavior" (pp. 123-124). In Shavelson's model, general self-concept is atop the pyramidal schema based on academic and non-academic self-concept. Academic self-concept is further apportioned into subareas of self-concept based on subject areas while non-academic self-concept is divided into social, emotional, and physical self-concept. Social self-concept is subdivided into self-concept relative to peers and significant others while physical self-concept is based on physical ability and physical appearance (Byrne & Shavelson, 1986; Shavelson & Bolus, 1982). Shavelson and Bolus (1982) posited that general self-concept is fairly stable over time but situation specific self-concept is relatively less stable. Calsyn

and Kenny (1977) argued that since self-concept variables are causes of academic achievement, a goodly amount of time should be designated to self-concept programs in the educational system.

Marsh (1986), after reviewing the literature related to self-concept, reported that only weak theoretical models existed to describe self-concept. As well, Marsh (1986) and Wylie (1974; 1979) reported that the available self-concept measurement instruments were of poor quality. Although limited empirical support was available for the Shavelson model, self-concept researchers began to examine the model and confirm the basic facets of self-concept, as identified by Shavelson, through research (Marsh, 1986). Marsh suggested that the Shavelson model offered the best possible representation of what self-concept truly embraced.

Based on the Shavelson model, Marsh (1986; 1990) designed a measure of self-concept. The original instrument was known as the Self Description Questionnaire I and was designed to measure self-concept in elementary school students in academic and non-academic self-concept. The Self-Description Questionnaire II was subsequently developed to be used with junior and senior high school students.

Marsh, Parker, and Barnes (1985) had asserted that self-concept reaches its lowest level in grade nine and thereafter increases, therefore the development of the instrument for this

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age group logically followed.

Self-concept is a major concern for educational personnel. In fact, poor self-concept in students has been identified as "inhibiting their actions and abilities" (American Association of University Women, 1991, p. 6). Numerous studies related to gender specific self-concept can be found in the literature (Marsh et al., 1988; American Association of University Women, 1991, 1992; Girls Incorporated, 1991) suggesting that the loss of self-concept is more dramatic and longlasting in females. In fact, the A.A.U.W. (1991) survey found striking differences between the sexes " with more boys than girls entering adolescence with high self-esteem and many more young men than young women leaving adolescence with high self-esteem " (p. 4).

As well, research related to single-sex and coeducational schooling has occurred primarily outside of the United States (Lee & Bryk, 1986; Schneider & Coutts, 1982). Even these studies are becoming dated and probably do not reflect the attitudes of the present time. The studies that have been completed in the United States seem to reflect experimenter bias by advocates of coeducation which serves to cast doubt on the objectiveness of their findings (Lee & Bryk, 1986).

Statement of the Problem

The present study explored how transitioning from a single-sex to a coeducational high school affected the self-concept of students in a private, Catholic high school. The initial data gathered was from a single-sex, all female population. Thereafter, data reflects an influx of males as the school transitioned from a single-sex to a coeducational high school.

There were several questions that were addressed regarding self-concept by studying this assessable population:

1. Did students differ significantly in the eleven areas of self-concept as measured by the Self Description Questionnaire II?

2. Did the self-concepts of freshmen, followed longitudinally, increase over the four year duration of this study, as the literature suggests?

3. Did the self-concepts of sophomores, followed longitudinally, increase over the four year duration of this study, as the literature suggests?

4. Did the mean self-concepts of each class level increase as progression from freshmen to senior status occurred?

This investigative research study provided pertinent knowledge regarding the self-concept of students in private, Catholic high schools as they transitioned from a single-sex community to a coeducational community. As well, since the

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instrument used to measure self-concept - Self Description Questionnaire II - has not been widely utilized in the United States. This study provided information further verifying the validity of this instrument as a theoretically consistent instrument for measuring self-concept (March, 1980).

Materials and Method

This study employed a causal-comparative research design. Potential threats to internal validity included testing and attrition. Since this study spanned four years and include pre-transition, transition, and post-transition Self Description Questionnaire II results, students may have become accustomed to the measuring instrument and responded to questions as they thought the researcher would like them to have responded to the questions. Built into the Self Description Questionnaire, however, is a factor designed to account for this possibility. Attrition was another potential threat to the internal validity of this study. Records of absenteeism on the days of Questionnaire administration were kept to account for uncompleted instruments.

The external validity of this study appears to be good for generalizing to future populations in this school setting.

The subjects for this study were volunteer students in grades nine through twelve, attending a private, Catholic high school in an urban setting in northwestern Pennsylvania. The age

range of the students was from fourteen to eighteen years of age. First year data was from an all female population, but thereafter an increasing number of males is noted in the data collection as the school transitioned from a single-sex to a coeducational educational facility.

Student participation was totally voluntary with students choosing to participate, not to participate, or to withdraw at any time. Signed consent forms for study participation were maintained for each participant. Confidentiality was guaranteed through the use of student identification numbers, although the participants could choose to identify themselves with their names at their option. The subjects were not harmed, deceived, demeaned, or embarrassed in any way. Nor were subjects physically or psychologically endangered during this research. Possible risks to participants included self-reflection, stress related to the completion of the task, and performance anxiety related to Questionnaire completion. No identifying information was used for data analysis procedures or in any written products that have resulted or will result from this study. Finally, no one other than the researcher viewed the individual Questionnaires.

The Self Description Questionnaire is a well researched instrument designed to measure self-concept on eleven scales (Marsh, Smith, Marsh & Owens, 1988). The eleven scales are

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General Self, Mathematics, Verbal, General School, Physical Abilities, Physical Appearance, Same-Sex Relations, Opposite-Sex Relations, Parent Relations, Honesty-Trustworthiness, and Emotional Stability. Administration time is approximately twenty minutes. The read-aloud administration procedure as detailed in the Self Description Questionnaire Manual were precisely observed to ensure that results of this study could be compared to the norming population data located in the Manual. Questionnaire administration occurred each year in the month of April or May. Administration over the public address system best ensured conformity of administration procedures. All volunteer participants completed the protocols simultaneously immediately following morning exercises. Absentees were not given an opportunity to complete the Questionnaire for any year in which they were absent on the day of administration.

Results

Analyses of variance revealed that males maintained significantly higher total self-concepts (M= 4.71) than did females (M= 4.51). There were no significant differences between the total self-concepts of all freshmen (M=4.54), sophomores (M=4.47), juniors (M=4.51), and seniors (M=4.35). In terms of general self-concept, males demonstrated significantly higher self-concepts (M=5.27) than females (M=5.02), while general self-

concept improved significantly as all students progressed from freshmen (M=4.95) to sophomores (M=4.95) through the junior year (M=5.05), and on through the senior year (M=5.16). Positive self-concept in the mathematics area was significantly in favor of males (M=4.33) in comparison to females (M=3.98) while underclass students (freshmen (M=4.13), sophomores (M=4.17), juniors (M=4.13) demonstrated significantly higher mathematics self-concepts than their senior counterparts (M=3.75). Verbal self-concept was significantly elevated for freshmen (M=4.71 when compared to all other classes -- sophomores (M=4.28), juniors (M=4.25), and seniors (M=4.24) -- with a notable trend toward lower self-concept evident as progress through the educational setting occurred.

In the area of physical abilities males again presented significantly higher self-concepts (M=4.95) than did females (M=4.50). There was no significant difference between classes. Physical appearance differences were also evident between genders, males (M=4.38) and females (M=4.31), however no significant differences were noted between classes. It is noted that as students progressed through the school setting physical appearance self-concept increased -- freshmen (M=4.11), sophomores (M=4.19), juniors (M=4.36) and seniors (M=4.55).

There were no significant differences in self-concept in relation to the opposite sex for gender (males M=5.24 and females

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M=5.24) or class (freshmen M=5.26, sophomores M=5.22, juniors M=5.22, and seniors M=5.25). As well, there were no significant differences in self-concept in relation to the same sex for gender (males M=4.79 and females M=4.68) however significant class differences were noted (freshmen M=4.66, sophomore M=4.80, junior M=4.72, and senior M=4.79), with a notable tendency for relationships with members of the same sex to improve over time. There were no significant gender (male M=4.52, female M=4.64) or class freshmen M=4.62, sophomore M=4.59, junior M=4.62, senior M=4.71) differences noted in the area of honesty however emotional self-concept was significantly different with males demonstrating higher emotional self-concept (M=4.30) in comparison to females (M=3.53). Class differences were insignificant for freshmen (M=3.60, sophomore (3.50), juniors (M=3.51), and seniors (M=3.60). General school self-concept was nonsignificant for class (freshmen M=4.79, sophomore M=4.74, junior M=4.71, senior M=4.80) and gender (female M=4.75 and male M=4.98). Finally, parent relations self-concept was nonsignificant for gender (male M=4.54 and female M=4.63) and for class (freshmen M=4.62, sophomore M=4.56, junior M=4.55, and senior M=4.74).

There was no statistically significant relationship between student class standing and total self-concept mean scores, $F(2,228)=0.551$ although there was decidedly a trend towards

improved total self-concept as maturation occurred.

In summary, this four year study of a private, Catholic school student population has added to the limited database presently available regarding self-concept as it pertains to the specific population that was accessible for this study.

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